

## REMARKS

As a preliminary matter, Applicants traverse the outstanding Office Action (Paper No. 13) in its entirety as being nonresponsive. The Examiner appears to have ignored many of Applicants' meritorious arguments from Amendment B, filed January 27, 2004, which were directed toward the Examiner's misreading of the Takaishi reference. Accordingly, Applicants respectfully incorporate all of the arguments from Amendment B by reference herein. The Examiner compounds these previous errors by again citing to the same portions of Takaishi that were previously misread.

Additionally, the Examiner has mischaracterized some of the few previous arguments to which the Examiner has responded. Specifically, the Examiner asserts on page 4 of Paper No. 13 that "Applicants asserted that Takaishi does not teach a settling control." Applicants first remind the Examiner that the arguments to which he refers (page 10 of Amendment B) were directed toward Fig. 6 of Takaishi specifically, which was cited by the Examiner as the basis of support for this claimed feature of the present invention. Fig. 6 of Takaishi simply does not teach or suggest any settling control, as appears to be again asserted by the Examiner. As previously argued, Fig. 6 teaches a "*SETTING*" control module 54, which continues to be misread by the Examiner to be a "*SETTLING*" control module, which is an entirely different and distinct component from that taught by Takaishi. The Examiner still has yet to address this clear misreading of the prior art reference, or any of Applicants' many meritorious arguments addressing the Examiner's clear error.

The Examiner also mischaracterizes Applicants' meritorious arguments from Amendment A, filed August 12, 2003, and which is also incorporated by reference herein. The Examiner erroneously asserts that "Applicants asserted that Takaishi does not teach the settling control compensation at the start of the settling." (Page 5 of Paper No. 13). First, and similar to the issue discussed above, the portion of Applicants' arguments to which the Examiner refers (third paragraph on page 10 of Amendment A) was directed only toward the only portion of text cited by the Examiner from Takaishi to support the Examiner's assertion that Takaishi taught to supply the claimed parameters at the start of settling. (Col. 6, lines 33-37). Applicant's arguments merely pointed out that this specific cited portion of Takaishi neither taught nor suggested anything of the sort.

Second, these specific arguments were not even directed toward *settling control compensation* at the start of settling, as now asserted by the Examiner, but instead toward the Examiner's earlier assertion that this portion of Takaishi's text taught the supply of "*at least a target trajectory or feed forward current that is proportional to the initial position or initial velocity* at the start of settling." The features (of claim 12) that were argued by Applicants are therefore much more detailed than the overly broad "settling control compensation" now mentioned by the Examiner. It is important to note that the Examiner has never rebutted these particular arguments either.

According to other actual arguments made by Applicant, the Examiner should note that his new citation to col. 22, lines 52-62 of Takaishi also fails to rebut the previous arguments in favor of the patentability of claim 12 of the present invention. The

paragraph cited from col. 22 of Takaishi does not even mention the supply of a target trajectory or feed forward current as proportional to the initial position or initial velocity. Additionally, the Examiner's remarks regarding this citation to this portion from Takaishi are erroneous, in that the only timing mentioned therein is the *seek* start point, and not the start of settling. This text from Takaishi generally refers to a "settling state," but does not in any way refer to any timing regarding this settling state, namely, a start or an end of the state.

For at least the foregoing reasons therefore, Applicants submit that the outstanding Office Action must be vacated, and the outstanding rejections reconsidered in light of the actual teachings from the prior art, as well as in light of all of Applicants' meritorious arguments traversing such rejections. Applicants respectfully request that the Examiner provide all future prior art citations with more precise specificity, so as to better avoid these continued errors.

Claims 1-2, 4-12, and 14-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Takaishi in view of Ottesen et al. (U.S. 4,894,599). Claims 5-10 and 15-20 have been cancelled without prejudice, rendering this rejection thereto now moot. With respect to the remaining claims 1-2, 4, 11-12, and 14, Applicants respectfully traverse this rejection for at least the reasons of record, the reasons discussed above, and as follows.

In the interests of expediting prosecution, independent claims 1 and 11 have been amended to read for better grammatical clarity, and to better distinguish the

embodiments of the present invention represented by these claims with those of independent claims 5 and 15. Prosecution of claims 5 and 15, and their respective dependent claims, is therefore going to continue in a separate Divisional Application, which is being presently filed to further narrow the issues for review in this case.

As amended, claims 1 and 11 now more clearly emphasize observer control and the difference between the present position and the estimated position at the start of settling, and no longer recite the previous integral compensation features. Applicants submit that the scope of the claims have not been narrowed by these amendments, but instead only rewritten for better grammatical clarity, or actually broadened. Applicants further submit that the two cited prior art references fail to teach or suggest these features of the claims, whether taken alone or together.

In the outstanding rejection, the Examiner has repeated many of the errors noted above with respect to the Takaishi reference. The addition of the Ottesen reference fails to correct or compensate for any of these errors, nor does Ottesen teach or suggest the features of the present invention that are clearly missing from the Takaishi reference. Applicants therefore further traverse the rejection as follows.

The “new” Section 103 rejection of the present invention is actually deficient on its face, because the two cited references do not even teach or suggest all of the features of independent claims 1 and 11. Section 2143.03 of the MPEP requires of the Examiner, in attempting to establish a *prima facie* case of obviousness, that the Examiner must first cite to where in the prior art is taught or suggested each and every

claimed feature and limitation of the present invention. In the present case, however, the Examiner has not done so. Additionally, as discussed above, many of the text portions that have been cited from the prior art do not support the Examiner's assertions.

Specifically, the Examiner again asserts that col. 6, lines 4-64, and col. 12, lines 2-34 of Takaishi describe a "control means that performs settling control," and that "the initial bias value is estimated from the difference between the detected position and the estimated position." (Page 3 of Paper No. 13). These cited portions from Takaishi though, as previously discussed, do not support these repeated assertions by the Examiner. The portion from column 6 of Takaishi describes an entering condition for shifting from coarse control. The cited portion from column 12 merely describes trajectory control.

As previously argued, the cited text from column 6 fails to mention any "SETTLING control" even once. "Control" in column 6 is described only in reference to a "seek controller," a "coarse control," a "switching control," a "speed control," and a "short-distance control." No other "control," however, is described within this portion of text. "Settling," on the other hand, is mentioned in column 6 only twice: first, in reference to whether a predetermined "settling condition" is satisfied after the short-distance coarse control (line 18); and second, in reference to a timing period from the start of a seek to the "end of settling" being measured (line 69). Neither occurrence teaches or suggests any "settling control." Both occurrences only reference measurement

of settling *parameters*, and not control. Accordingly, the Examiner's repeated references to column 6 to support this rejection is inappropriate.

The citation to column 12, lines 2-34 of Takaishi suffers from a similar deficiency. Not once in this portion of text is settling control taught or suggested. As previously explained, column 12 only refers to "*SETTING* control modules" or "*SETTING* modules." Applicants have repeatedly pointed out the apparent confusion over the similarly spelled words – "setting" and "settling" – but the Examiner has not answered any of these arguments, nor has he explained how the continued reference to column 12 is at all relevant to the cited features of the present invention. In fact, not only does column 12 fail to teach settling control, as asserted by the Examiner, its text is even included under the heading of "Short-distance *Seek* Control." (Col. 11, line 42). Those skilled in the art are well aware that seek control, settling control, and coarse control are not merely interchangeable.

Additionally, the text from column 12 could not teach or suggest the features of the present invention, and observer control in particular, even without the obvious spelling errors made by the Examiner. This text portion refers to trajectory control, and teaches that the correction value of the trajectory is initially determined through calibration at the manufacturing stage of the apparatus. (See col. 12, lines 20-23). The bias value of the present invention, on the other hand, relates to observer control, and is estimated at the start of settling.

Therefore, even if the spellings from this portion of Takaishi were according to the Examiner's reading, Takaishi still teaches that the initial bias value cited by the Examiner relates to trajectory control, and not observer control, and also that it is calibrated during manufacturing (prior to actual operation of the device), and not estimated at the start of settling (during the actual operation). Accordingly, for all of the foregoing reasons, Applicants submit that the Section 103 rejection of the present invention has been fully traversed, and should be withdrawn.

The only other portion of text from Takaishi cited by the Examiner for support is column 22, line 52 to column 23, line 42. Similar to the deficiencies in the Examiner's other citations to Takaishi, however, this text portion also fails to teach settling control. Not once does this cited text section even refer to settling control. The only "settling" mentioned is the reaching of the "settling *state*" (col. 22, line 55), and the measurement of a "first settling *determination*" (col. 22, lines 61-62). Columns 22-23 therefore also only refer to timing and/or measurements of settling *parameters*, but not the actual control of settling. The only "control" actually mentioned within this portion of text is the "*seek control*." (Col. 23, line 31). Accordingly, all of the Examiner's citations to support "settling control" from Takaishi fail to actually teach or suggest such features. The Examiner has therefore failed to provide any reasonable support for his repeated reliance on Takaishi against the present invention, and has also failed to rebut any of Applicants meritorious arguments traversing this reliance. Accordingly, for all of the foregoing reasons, the Section 103 further should be withdrawn.

With respect to the Ottesen reference, Ottesen actually serves to support Applicants' many meritorious arguments against the reliance on the Takaishi reference. Ottesen explicitly describes that the settle mode, the seek operation, and the track follow mode are all distinct and separate from one another. (See col. 1, lines 22-27). Ottesen though, does not specifically teach or suggest any timing of the settling control, but instead only a separate "deadbeat control" operation that is used *during* the settle mode, but is not described to begin the settle mode itself. (See col. 1, lines 45-48).

Moreover, Ottesen even describes a PID control that includes an integration element, and the setting of an estimated initial value of the PID element when in the deadbeat mode. Ottesen fails to therefore teach or suggest any observer control for estimating the bias value for the recited difference between the present position and the estimated position, or that the bias value is initially set at the beginning of the settling, as in claims 1 and 11 of the present invention. Ottesen thus fails to teach the specific timing of the present invention, and one skilled in the art will be apprised that a deadbeat control within the settle mode is not the same as a settling control operation of the entire settle mode itself. Accordingly, the Ottesen reference is inapplicable to the specific features of the present invention relating to settling control as a whole, as well as the additional specific timing features related to the start of settling.

Additionally, the Examiner has provided no rationale of how Ottesen can be combined with Takaishi. As discussed above, the only bias values the Examiner cites from Takaishi actually teach away from the present invention. Takaishi only refers to the



broad timing period of the “start of *seek* to the end of settling.” (See col. 6, line 59). The start of settling, therefore, would necessarily have to be somewhere in between these two disclosed parameters, and is not expressly even described by Takaishi.

The combination with Ottesen also fails to provide any suggested motivation for how the timing values that are not expressly described in Takaishi could be applied to the unrelated timings that are described for Ottesen’s deadbeat control. Again, although Ottesen describes that the deadbeat control is performed *during* the settling mode, Ottesen does not teach or suggest that the deadbeat control occupies the entire settling control of the settling mode, or how it coincides with the start of settling itself. Accordingly, for at least these further reasons, the Section 103 rejection of the present invention based on a combination of Takaishi with Ottesen is again traversed, and should be withdrawn.

For all of the foregoing reasons, Applicants submit that this Application, including claims 1-2, 4, 11-12, and 14, is in condition for allowance, which is respectfully requested. The Examiner is again invited to contact the undersigned attorney if an interview could expedite prosecution.

Respectfully submitted,

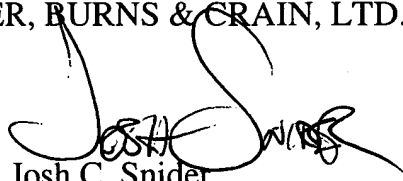
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